CLAIMS:

1.   A method comprising:

directing an implantable neurostimulator to deliver neurostimulation according to a plurality of programs during a programming session, each of the programs including a plurality of parameters that define delivery of neurostimulation according to that program;

estimating a battery drain rate for each of the programs based on the parameters for that program; and

presenting battery longevity information for each of the programs to a user based on the battery drain rates.

2.   The method of claim 1, wherein the parameters for each of the programs include at least one of a pulse amplitude, a pulse width, a pulse rate, and a duty cycle.

3.   The method of claim 1, wherein the parameters for each of the programs include a number of anodes and a number of cathodes for delivery of neurostimulation according to that program, and estimating a battery drain rate for one of the programs comprises:

estimating a load for the program based on the number of anodes and the number of cathodes; and

estimating the battery drain rate based on the estimated load.

4.   The method of claim 3, wherein estimating a load comprises estimating the load based on an assumed per-electrode impedance.

5.   ˙ The method of claim 1, wherein estimating a battery drain rate for one of the programs comprises:

receiving device configuration information;

estimating a load for the program based on the device configuration information; and

estimating the battery drain rate based on the estimated load.

6.   The method of claim 5, wherein the device configuration information includes at least one of an implantable neurostimulator type, a lead type, and electrode locations.

7.   The method of claim 1, wherein the parameters for each of the programs include an identification of anodes and cathodes for delivery of neurostimulation according to that program, and estimating a battery drain rate for one of the programs comprises:

measuring an impedance for each of the anodes and cathodes identified by the program;

calculating a load based on the measured impedances; and

estimating the battery drain rate based on the load.

8.   The method of claim 1, wherein presenting battery longevity information for each of the programs to a user comprises presenting the battery longevity information within a list of the programs.

9.   The method of claim 8, further comprising ordering the list according to the battery longevity information.

10.   The method of claim 8, further comprising:

receiving rating information for each of the programs; and

presenting the rating information within the list.

11.   The method of claim 10, further comprising ordering the list according to at least one of the battery longevity information and the rating information.

12.   The method of claim 10, wherein the rating information for each of the programs includes at least one of an efficacy score and an estimation of overlap of pain and paresthesia.

13.   The method of claim 1, further comprising:

receiving rating information for each of the programs;

presenting a first list of the tested programs, the first list including the rating information and ordered according to the rating information;

receiving selections made by the user from the first list;

presenting a second list that includes the programs selected from the first list and the longevity information associated with the selected programs, the second list ordered according to the longevity information;

receiving a selection made by the user of at least one program from the second list; and

programming the implantable neurostimulator with the selected program.

14.   The method of claim 13, wherein estimating a battery drain rate for each of the programs comprises estimating the drain rate for each of the programs selected from the first list upon selection from the first list.

15.   The method of claim 13, further comprising storing at least some of the programs from the second list within a memory.

16.   The method of claim 1, wherein presenting battery longevity information to a user comprises presenting the battery drain rates.

17.   The method of claim 1, further comprising estimating battery longevities for each of the programs based on the battery drain rates for each of the programs, wherein presenting the battery longevity information to a user comprises presenting the battery longevities.

18.   The method of claim 1, wherein presenting battery longevity information to a user comprises presenting an estimated length of battery service.

19.   The method of claim 1, further comprising receiving selection of the parameters for each of the programs from the user.

20.   A programming device comprising:

        a telemetry circuit;

        a user interface; and

        a processor to direct an implantable neurostimulator to deliver neurostimulation according to a plurality of programs during a programming session via the telemetry circuit, each of the programs including a plurality of parameters that define delivery of neurostimulation according to that program, estimate a battery drain rate for each of the programs based on the parameters for that program, and present battery longevity information to a user via the user interface based on the estimated battery drain rates.

21.   The programming device of claim 20, wherein the parameters for each of the programs include at least one of a pulse amplitude, a pulse width, a pulse rate, and a duty cycle.

22.   The programming device of claim 20, wherein the parameters for each of the programs include a number of anodes and a number of cathodes for delivery of neurostimulation according to that program, and the processor estimates a load for one of the programs based on the number of anodes and the number of cathodes for the program, and estimates the battery drain rate for the program based on the estimated load.

23.   The programming device of claim 22, further comprising a memory to store an assumed per-electrode impedance, wherein the processor estimates the load based on the assumed per-electrode impedance.

24.   The programming device of claim 20, wherein the processor receives device configuration information, estimates a load for one of the programs based on the device configuration information, and estimates a battery drain rate for the program based on the estimated load.

25.   The programming device of claim 24, wherein the device configuration information includes at least one of an implantable neurostimulator type, a lead type, and electrode locations.

26.   The programming device of claim 24, wherein the processor receives at least some of the device configuration information from the user via the user interface.

27.   The programming device of claim 20, wherein the parameters for each of the programs include an identification of anodes and cathodes for delivery of neurostimulation according to that program, and the processor controls the implantable neurostimulator to measure the impedance for each of the anodes and cathodes identified by one of the programs, calculates a load for the program based on the measured impedances, and estimates the battery drain rate for the program based on the load.

28.   The programming device of claim 20, wherein the processor presents the battery longevity information within a list of the programs.

29.   The programming device of claim 28, wherein the processor orders the list according to the battery longevity information.

30.   The programming device of claim 28, wherein the processor receives rating information for each of the programs, and presents the rating information within the list.

31.   The programming device of claim 30, wherein the processor orders the list according to at least one of the battery longevity information and the rating information. ˘

32.   The programming device of claim 30, wherein the rating information for each of the programs includes at least one of an efficacy score and an estimation of overlap of pain and paresthesia.

33.   The programming device of claim 20, wherein the processor receives rating information for each of the programs, presents a first list of the tested programs that includes the rating information and is ordered according to the rating information, receives selections made by the user from the first list, presents a second list that includes the programs selected from the first list and the longevity information associated with the selected program, the second list ordered according to the longevity information, receives a selection made by the user of at least one program from the second list, and programs the implantable neurostimulator with the selected program via the telemetry circuit.

34.   The programming device of claim 33, wherein the processor estimates drain rates for each of the programs selected from the first list upon selection.

35.   The programming device of claim 33, further comprising a memory to store at least some of the programs from the second list.

36.   The programming device of claim 20, wherein the battery longevity information comprises the estimated battery drain rates.

37.   The programming device of claim 20, wherein the processor estimates battery longevities for each of the programs based on the battery drain rates for each of the programs, and the battery longevity information comprises the estimated battery longevities.

38.   The programming device of claim 20, wherein processor presents an estimated length of battery service for each of the programs to the user via the user interface.

39.   The programming device of claim 20, wherein the processor receives selection of the parameters for each of the programs from the user via the user interface.

40.   A computer-readable medium comprising instructions that cause a programmable processor to:

direct an implantable neurostimulator to deliver neurostimulation according to a plurality of programs during a programming session, each of the programs including a plurality of parameters that define delivery of neurostimulation according to that program;

estimate a battery drain rate for each of the programs based on the parameters for that program; and

present battery longevity information to a user based on the estimated battery drain rates.

41.   The computer-readable medium of claim 40, wherein the parameters for each of the programs include at least one of a pulse amplitude, a pulse width, a pulse rate, and duty cycle.

42.   The computer-readable medium of claim 40, wherein the parameters for each of the programs include a number of anodes and a number of cathodes for delivery of neurostimulation according to that program, and the instructions that cause a programmable processor to estimate a battery drain rate for one of the programs comprise instructions that cause a programmable processor to:

estimate a load for the program based on the number of anodes and the number of cathodes; and

estimate the battery drain rate based on the estimated load.

43.   The computer-readable medium of claim 42, wherein the instructions that cause a programmable processor to estimate a load comprise instructions that cause a programmable processor to estimate the load based on an assumed per-electrode impedance.

44.   The computer-readable medium of claim 40, further comprising instructions that cause a programmable processor to receive device configuration information, wherein the instructions that cause a programmable processor to estimate a battery drain rate for one of the programs comprise instructions that cause a programmable processor to:

estimate a load based on the device configuration information; and

estimate the battery drain rate for the program based on the estimated load.

45.   The computer-readable medium of claim 44, wherein the device configuration information includes at least one of an implantable neurostimulator type, a lead type, and electrode locations.

46.   The computer-readable medium of claim 40, wherein the parameters for each of the programs include an identification of anodes and cathodes for delivery of neurostimulation according to that program, and the instructions that cause a programmable processor to estimate a battery drain rate for one of the programs comprise instructions that cause a programmable processor to:

control the implantable neurostimulator to measure the impedance for each of the anodes and cathodes identified by the program;

estimate a load for the program based on the measured impedances; and

estimates the battery drain rate for the program based on the estimated load.

47.   The computer-readable medium of claim 40, wherein the instructions that cause a programmable processor to present battery longevity information comprise instructions that cause a programmable processor to present the battery longevity information within a list of the programs.

48.   The computer-readable medium of claim 47, further comprising instructions that cause a programmable processor to order the list according to the battery longevity information.

49.   The computer-readable medium of claim 47, further comprising instructions that cause a programmable processor to:

receive rating information for each of the programs; and

present the rating information within the list.

50. The computer-readable medium of claim 49, further comprising instructions that cause a programmable processor to order the list according to at least one of the battery longevity information and the rating information.

51. The computer-readable medium of claim 49, wherein the rating information for each of the programs includes at least one of an efficacy score and an estimation of overlap of pain and paresthesia.

52. The computer-readable medium of claim 40, further comprising instructions that cause a programmable processor to:
    receive rating information for each of the programs;
    present a first list of the tested programs, the first list ordered according to the rating information;
    receive selections made by the user from the first list;
    present a second list that includes the programs selected from the first list and the longevity information associated with the programs selected from the first list, the second list ordered according to the longevity information;
    receive selection of at least one program from the second list made by the user; and
    program the implantable neurostimulator with the selected program.

53. The computer-readable medium of claim 52, wherein the instructions that cause a programmable processor to estimate a battery drain rate for each of the programs comprise instructions that cause a programmable processor to estimate the drain rate for each of the programs selected from the first list upon selection from the first list.

54. The computer-readable medium of claim 52, further comprising instructions that cause a programmable processor to store at least some of the programs from the second list in a memory.

55. The computer-readable medium of claim 40, wherein the instructions that cause a programmable processor to display battery longevity information comprise instructions that cause a programmable processor to display the estimated drain rates.

56. The computer-readable medium of claim 40, further comprising instructions that cause a programmable processor to estimate battery longevities for each of the programs based on the battery drain rates for each of the programs, wherein the instructions that cause a programmable processor to present battery longevity information comprise instructions that cause a programmable processor to present the estimated battery longevities.

57. The computer-readable medium of claim 40, wherein the instructions that cause a programmable processor to present battery longevity information to a user comprise instructions that cause a programmable processor to present an estimated length of battery service for each of the programs.

58. The computer-readable medium of claim 40, further comprising instructions that cause a programmable processor to receive selection of the parameters for each of the programs from the user.